Claims

1. (previously presented) A dynamic magnet system, comprising:

a support structure, and

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually substantially different properties.

2. (previously presented) The dynamic magnet system of claim 1, said at least some magnets having substantially different magnetic strengths.

3. (original) The dynamic magnet system of claim 2, said at least some magnets having substantially equal sizes.

4. (previously presented) The dynamic magnet system of claim 1, said at least some magnets having substantially different sizes.

5. (original) The dynamic magnet system of claim 4, said at least some magnets having substantially equal unit magnetic strengths.

6. (original) The dynamic magnet system of claim 1, further comprising respective bearings establishing static coefficients of friction between said magnets and said support structure less than 0.02.

7. (original) The dynamic magnet system of claim 1, further comprising ferrofluid bearings between said magnets and said support structure.

8. (original) The dynamic magnet system of claim 7, said ferrofluid having a viscosity less than 10 centipoise.

9. (previously presented) A dynamic magnet system, comprising:

a support structure,

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually different properties, and

ferrofluid bearings between said magnets and said support structure, said ferrofluid comprising a light mineral oil medium mixed with isoparafinic acid and having a viscosity less than 10 centipoise.

10. (original) The dynamic magnet system of claim 1, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

11. (original) The dynamic magnet system of claim 10, said conductor comprising at least one coil wound on said support structure, said support structure being nonconductive.

12. (original) The dynamic magnet system of claim 10, further comprising an operating system powered by said signal.

13. (previously presented) The dynamic magnet system of claim 1, further comprising a pair of end magnets limiting the travel of said moving magnets, said end magnets oriented in polar opposition to the nearest respective moving magnet.

14. (previously presented) A dynamic magnet system, comprising:

a support structure, and

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually different properties,

said magnets having multiple oscillation modes relative to said support structure.

15. (original) The dynamic magnet system of claim 1, said support structure orienting said magnets for movement in a primarily horizontal direction.

16. (original) The dynamic magnet system of claim 1, said magnets oriented for movement along a common axis.

17. (original) The dynamic magnet system of claim 1, said system having a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

18. (original) The dynamic magnet system of claim 17, wherein said critical angle is less than 10 minutes.

19. (previously presented) An energy harvester, comprising:

a support structure,

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other, and to oscillate relative to said support structure in multiple oscillation modes, at least some of said magnets having mutually different properties,

respective bearings establishing static coefficients of friction between said magnets and said support structure less than 0.02, and

a conductor oriented with respect to said support structure and magnets so that oscillation of said magnets in response to a movement of said support structure induces an electrical signal in said conductor.

20. (original) The energy harvester of claim 19, said at least some magnets having different magnetic strengths.

21. (original) The energy harvester of claim 20, said at least some magnets having substantially equal sizes.

22. (original) The energy harvester of claim 19, said at least some magnets having different sizes.

23. (original) The energy harvester of claim 22, said at least some magnets having substantially equal unit magnetic strengths.

24. (original) The energy harvester of claim 19, said bearings comprising a ferrofluid.

25. (original) The energy harvester of claim 24, said ferrofluid having a viscosity less than 10 centipoise.

26. (original) The energy harvester of claim 24, said ferrofluid comprising a light mineral oil medium mixed with isoparaffinic acid.

27. (original) The energy harvester of claim 19, further comprising an operating system powered by said signal.

28. (original) The energy harvester of claim 19, said support structure orienting said magnets for movement in a primarily horizontal direction.

29. (previously presented) An energy harvester, comprising:

a support structure,

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other, and to oscillate relative to said support structure in multiple oscillation modes, at least some of said magnets having mutually different properties, and

a conductor oriented with respect to said support structure and magnets so that oscillation of said magnets in response to a movement of said support structure induces an electrical signal in said conductor,

wherein said harvester has a critical angle of displacement for said magnets from a horizontal static position of less than 1 degree.

30. (original) The energy harvester of claim 29, wherein said magnets have different magnetic strengths.

31. (original) The energy harvester of claim 29, wherein said critical angle is less than 10 minutes.

32. (original) The energy harvester of claim 29, further comprising an operating system powered by said signal.

33. (previously presented) A dynamic magnet system, comprising:

a support structure, and

an even number of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually different properties.

34. - 42. (canceled).

43. (previously presented) The dynamic magnet system of claim 33, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

44. - 47. (canceled).

48. (previously presented) A dynamic magnet system, comprising:

a support structure,

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually substantially different properties, and

respective bearings establishing ultra low static coefficients of friction less than 0.02 between said magnets and said support structure,

said support structure orienting said magnets for primarily horizontal movement.

49. (previously presented) The dynamic magnet system of claim 48, said at least some magnets having substantially different magnetic strengths.

50. (original) The dynamic magnet system of claim 49, said at least some magnets having substantially equal sizes.

51. (previously presented) The dynamic magnet system of claim 48, said at least some magnets having substantially different sizes.

52. (original) The dynamic magnet system of claim 51, said at least some magnets having substantially equal unit magnetic strengths.

53. (original) The dynamic magnet system of claim 48, said bearings comprising a ferrofluid.

54. (original) The dynamic magnet system of claim 53, said ferrofluid having a viscosity less than 10 centipoise.

55. (previously presented) A dynamic magnet system, comprising:

a support structure,

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually different properties, and

respective bearings establishing ultra low static coefficients of friction less than 0.02 between said magnets and said support structure,

said support structure orienting said magnets for primarily horizontal movement, said bearings comprising a ferrofluid, and said ferrofluid comprising a light mineral oil medium mixed with isoparafinic acid.

56. (original) The dynamic magnet system of claim 48, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

57. (original) The dynamic magnet system of claim 48, further comprising an operating system powered by said signal.

58. (previously presented) A dynamic magnet system, comprising:

a support structure,

a plurality of magnets oriented successively in polar opposition for individual movement relative to each other and to said support structure, at least some of said magnets having mutually different properties, and

respective bearings establishing ultra low static coefficients of friction less than 0.02 between said magnets and said support structure,

said support structure orienting said magnets for primarily horizontal movement,

said magnets having multiple oscillation modes relative to said support structure.

59. - 64. (canceled)

65. (previously presented) The dynamic magnet system of claim 1, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

66. (previously presented) The dynamic magnet system of claim 65, further comprising an operating system powered by said signal.

67. (previously presented) The dynamic magnet system of claim 9, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

68. (previously presented) The dynamic magnet system of claim 67, further comprising an operating system powered by said signal.

69. (previously presented) The dynamic magnet system if claim 14, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

70. (previously presented) The dynamic magnet system of claim 69, further comprising an operating system powered by said signal.

71. (previously presented) The dynamic magnet system of claim 43, further comprising an operating system powered by said signal.

72. (previously presented) The dynamic magnet system of claim 55, further comprising a conductor oriented with respect to said support structure and magnets so that movement of said magnets induces an electrical signal in said conductor.

73. (previously presented) The dynamic magnet system of claim 72, further comprising an operating system powered by said signal.

74. (previously presented) The dynamic magnet system of claim 58, further comprising a conductor oriented with respect to said support structure and magnets so that move-

ment of said magnets induces an electrical signal in said conductor.

75. (previously presented) The dynamic magnet system of claim 74, further comprising an operating system powered by said signal.